8.1. Inventory

What is transportation planning?

Transportation planning is a **process** for identifying current and future transportation needs and developing solutions to meet those needs. Its purpose is to provide policy and program options and implementation strategies to elected officials and transportation partners so they can make transportation investment decisions which meet the community's needs. The ultimate goal is to maximize the benefits derived from the transportation system while reducing the associated negative aspects such as congestion and pollution. Ideally, transportation planning will result in a transportation system which accomplishes the following:

US 411 in Southern Murray County

- supports economic vitality
- increases safety
- increases mobility, accessibility, and connectivity
- protects the environment
- improves quality of life
- promotes efficient system management

While vehicular and truck traffic is typically the primary focus of transportation planning, this transportation element also highlights other aspects of Murray County's transportation network including bicycle and pedestrian facilities, public transportation, rail service, and air service.

8.1.1. Streets, Roads, and Highways

Roadway Network and Functional Classification

Functional classification is a way of grouping roads, streets, and highways in a hierarchy based on the type of highway service they provide. A typical hierarchy includes arterials, collectors, and local roads.

Streets and highways perform two types of service: traffic mobility and land access. In general, the greater the mobility afforded by a street, the less access to adjacent land it provides and vice versa. This is illustrated in the figure to the right.

Murray County contains just over 560 miles of roads in its transportation network. The roads in Murray County can be categorized into the following five functional classifications.

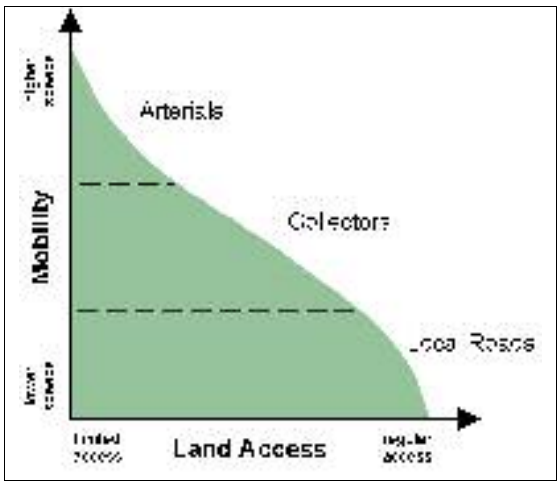


Figure 8-A. Functional Classification and the Relationship Between Access and Mobility.

Principal Arterial. (Example: US 76) A principal arterial provides for high speed travel and is typically used for longer vehicle trips. Mobility through an area rather than access to adjacent properties is the primary function of an arterial. Often curb cuts are limited to improve traffic flow. Traffic volumes are typically highest on principal arterials.

Minor Arterial. (Example: GA Highway 2) A minor arterial provides for relatively high speed travel and is used to serve traffic generators which attract travel over longer distances (e.g. shopping centers, large schools).

Major Collector. (Example: Spring Place-Smyrna Road) A major collector usually connects commercial centers and other large traffic generators to an arterial road. Collector roads provide both mobility and land access, with major collectors providing more mobility and less land access than a minor collector. Generally, trip lengths, speeds, and volumes are moderate.

Minor Collector. (Example: Crandall-Ellijay Road) A minor collector typically collects traffic from local roads and distributes it to major collectors or arterials. Minor collectors provide both mobility and land access with a greater emphasis on land access than a major collector. Generally, trip lengths, speeds, and volumes are moderate.

Local Road. The primary function of a local road is to provide land access. Speed limits and traffic volumes are generally low. Most side streets in downtown areas and most streets in residential neighborhoods are classified as local roads. Generally, through traffic is limited because these roads are short and often end in cul-de-sacs. Rural local roads typically serve residences and scattered businesses which individually do not generate large volumes of traffic.

Table 8-A provides mileage by functional classification of the roads in Murray County while Figure 8-B provides an illustration of the various road types in the county.

Table 8-A. Classification of Roads in Murray County

Classification	State Route Mileage	County Road Mileage	City Street Mileage	Total
Rural Principal Arterial	19.13	0.00	0.00	19.13
Rural Minor Arterial	53.33	4.07	0.00	57.40
Rural Major Collector	27.99	37.96	0.00	65.95
Rural Minor Collector	0.00	16.10	0.00	16.10
Rural Local Roads	1.00	368.87	32.91	402.78
Total	**101.45**	**427.00**	**32.91**	**561.36**

Source: GDOT Office of Information Services, 400 Series Reports, 1DPP445-PDS

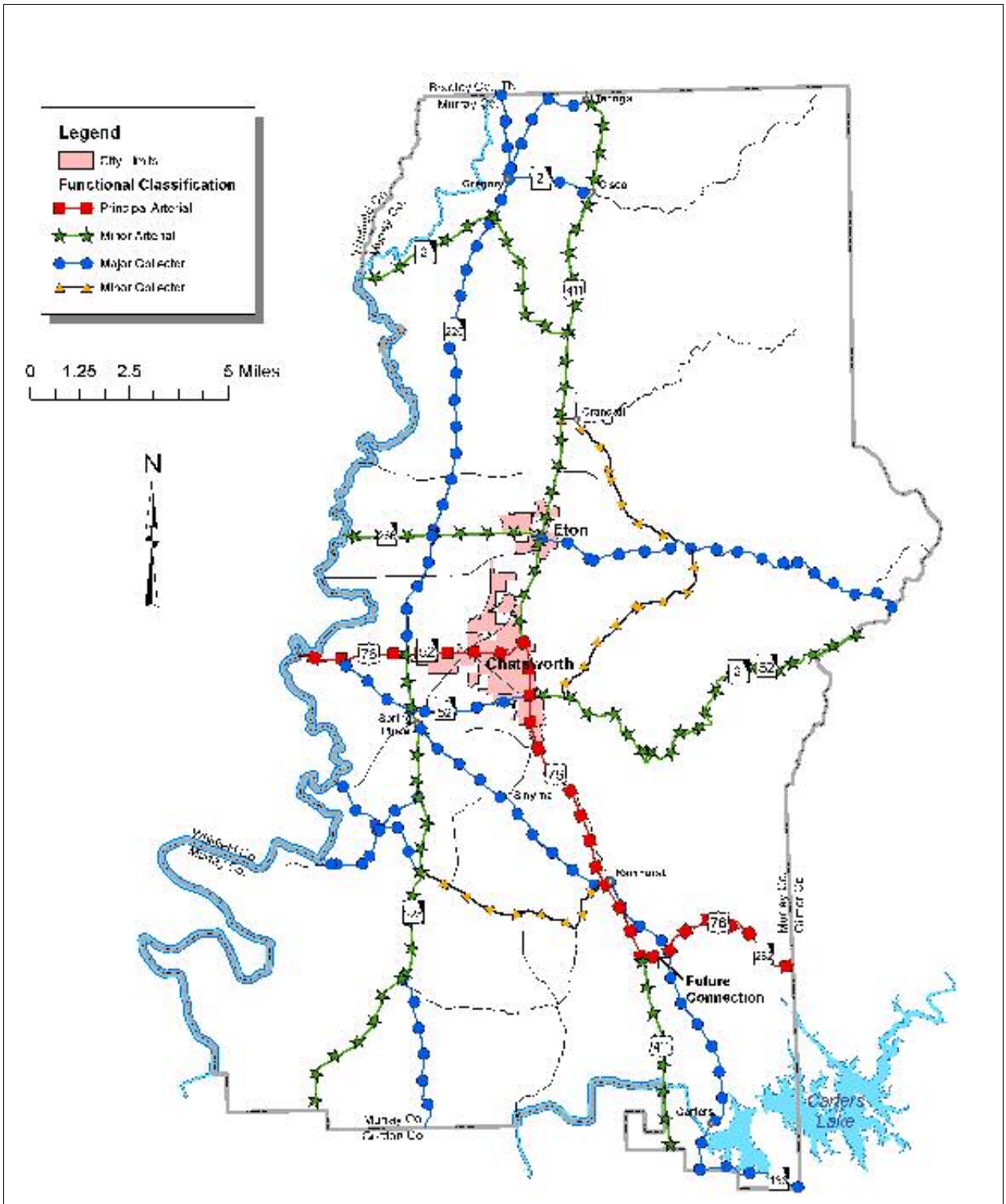


Figure 8-B.
Functional Classification of Roads in Murray County

City Streets

Chatsworth. The City of Chatsworth is responsible for just over 30 miles of streets within its limits. Table 8-B provides a listing of those streets. Note that not all streets located within the city are city-owned.

Table 8-B. Chatsworth City Streets

Street	Miles	Class	Street	Miles	Class	Street	Miles	Class	Street	Miles	Class
Austin	0.3	local	E. Moravian	0.2	local	Holly	0.4	local	Pemotana	0.1	local
Barksdale	0.3	local	East Plantation	0.4	local	Hospital	0.3	local	Pine	0.4	local
Barley	0.3	local	Elm	0.3	local	Industrial	1.2	local	Ridge	0.1	local
Blue Springs	0.4	local	Emerald	0.3	local	Jackson	0.1	local	Rollie	0.4	local
Bradley	0.2	local	Murray	0.2	local	Judson Vick	0.3	local	Ross	0.3	local
Cedar	0.4	local	Myers	0.0	local	Lake View	0.2	local	Ruby	0.1	local
Central	0.1	local	Ninth	0.1	local	Lakeshore	0.3	local	Sahara	0.2	local
Charles	0.6	local	Northpark	0.2	local	Locust	0.6	local	School	0.2	local
Cherokee	0.5	local	Oak	0.4	local	Long	1.2	local	Second	1.4	local
Cherry	0.1	local	Old Federal	0.2	local	Lowy	0.5	local	Seventh	0.1	local
Chestnut	0.4	local	Fair	0.1	local	Market	0.9	local	Sixth	1.0	local
Cohutta	0.6	local	Fifth	1.2	local	Mary Francis	0.1	local	Smyrna Church	0.1	local
Colonial Hills	0.4	local	First	0.5	local	Meir	0.3	local	Southern	0.3	local
Columbus	0.2	local	Fort Mountain	0.4	local	Melissa	0.3	local	Sunset	0.2	local
Cook	0.3	local	Fort St. Pl.	0.1		Misty Valley	0.3	local	Tenth	0.2	local
Cordell	0.2	local	Fourth	1.6	local	Moravian	0.4	local	Thompson	0.1	local
Cotton	1.2	local	Furrow	0.0	local	Old Salem	0.1	local	Treadwell	0.6	local
Diamond	0.8	local	Hana	0.1	local	Olive	0.4	local	Vann's Town	0.1	local
Dogwood	0.3	local	Hay	0.1	local	Palm	0.1	local	Virginia	0.2	local
Duvall	0.9	local	Highland	0.4	local	Peachtree	0.6	local	Walnut	0.5	local
East Market	0.1	local							Wheat	0.5	local

Source: City of Chatsworth. All streets are 2-lane local roads.

Eton. The City of Eton is responsible for 7.8 miles of streets within its limits. Table 8-C provides a listing of those streets. Not all streets in the city are city-owned or maintained.

Table 8-C. Eton City Streets

Street	Miles	Class	Street	Miles	Class	Street	Miles	Class	Street	Miles	Class
Cemetery	0.3	local	Long	0.9	local	Old Federal	0.5	local	1st Ave.	0.2	local
Cobb	0.2	local	Merritt	0.4	local	Petty	0.4	local	2nd Ave.	0.2	local
Eton Indust.	0.1	local	Mitchell Bridge	0.2	local	Strickland	0.1	local	3rd Ave.	0.3	local
Glenn	0.4	local	Mt. Carmel Church	0.6	local	Tom Gregory	0.5	local	4th Ave.	0.4	local
Hall	0.2	local	Murray	0.2	local	Walker	0.8	local	5th Ave.	0.4	local
Harris	0.3	local							6th Ave.	0.2	local

Source: City of Eton. All streets are 2-lane local roads.

Traffic Volumes

The Georgia Department of Transportation maintains permanent and portable traffic count stations throughout the state. It uses portable collection devices to collect the traffic during typical travel conditions (not on holidays or weekends). The raw hourly counts are adjusted by seasonal, daily, and axle factors to determine the Annual Average Daily Traffic (AADT). In order to ensure the most reasonable traffic data is reported in the long term, the GDOT's portable traffic count program collects data on an annual cycle in which data is collected at each station for a 48-hour period.

The locations of the stations in Murray County are shown in Figure 8-C. With the exception of a few roads, traffic volumes did not increase dramatically during the five year period between 1999 and 2004 as illustrated in the last column in Table 8-D and Table 8-E. In fact, many road segments showed a drop in traffic during the last five years even though volumes increased over the ten year period between 1994 and 2004. For example, volumes on US 76/GA 52 just east of the Murray County/Whitfield County line increased by 16% between 1994 and 2004, but decreased by 31% between 1999 and 2004. The traffic count stations which showed the greatest percentage growth in the number of average daily trips were on Halls Chapel Road and GA 286.

Table 8-D. Traffic Counts (Estimated Annual Average Daily Trips) on Principal and Minor Arterials in Murray County.

Highway and Station #		1994	1999	2000	2001	2002	2003	2004	% Change '94-'04	% Change '99-'04
Principal Arterial										
US 76 (west to east)	127	24,337	40,762	31,880	32,834	28,670	28,860	28,320	16%	-31%
" "	145	17,842	26,590	24,443	25,700	20,780	21,270	19,880	11%	-25%
" "	147	16,800	28,917	26857	28,417	21,336	22,010	18,250	9%	-37%
" "	202	16,977	26,878	16,650	17,300	17,451	21,960	17,880	5%	-33%
" "	201	10,873	20,787	18,520	21,436	13,435	13,340	17,750	63%	-15%
" "	198	8,685	12,010	9,680	9,922	9,582	9,300	12,060	39%	0%
" "	221	3,916	4,071	4,060	4,498	4,229	4,030	4,260	9%	5%
Minor Arterials										
GA 2	169	1,287	1,860	2,060	1,824	1,748	1,570	2,120	65%	14%
" "	136	5,068	6,238	6,320	7,184	5,535	5,330	6,020	19%	-3%
" "	141	969	945	860	926	977	860	1,110	15%	17%
" "	143	486	584	648	693	575	510	660	36%	13%
Halls Chapel Road	174	877	495	520	1,528	1,150	1,360	1,200	37%	142%
GA 286	152	4,019	4,090	4,718	5,179	5,318	5,390	5,570	39%	36%
" "	156	3,198	2,940	3,964	3,779	4,351	4,410	4,380	37%	49%
US 411	215	3,030	3,828	3,572	4,207	3,938	3,840	3,700	22%	-3%
" "	214	3,776	4,258	3,959	4,529	4,519	4,370	4,470	18%	5%
" "	212	5,968	7,559	8,180	8,086	8,103	8,180	5,470	-8%	-28%
" "	209	11,948	14,080	15,360	11,527	13,086	12,830	12,350	3%	-12%
" "	205	13,853	17,279	18,520	18,321	17,251	17,460	14,810	7%	-14%
" "	229	3,904	4,010	3,640	3,744	3,794	3,710	3,940	1%	-2%
GA 225 (south of US 76)	109	4,608	7,621	6,400	4,963	4,879	4,810	4,990	8%	-35%
" "	107	6,544	9,190	7,771	7,921	7,089	7,680	7,400	13%	-19%
" "	105	4,000	5,477	4,400	4,968	5,263	5,190	5,240	31%	-4%
" "	103	3,163	4,757	3,940	3,751	4,124	3,800	4,220	33%	-11%

Table 8-E. Traffic Counts (Estimated Annual Average Daily Trips) on Major and Minor Collector Roads in Murray County.

Highway and Station #		1994	1999	2000	2001	2002	2003	2004	% Change '94-'04	% Change '99-'04
Major Collector										
GA 225 (north of US 76)	121	1,350	1,802	1,552	1,775	1,590	1,570	1,660	23%	-8%
" "	118	2,980	3,366	3,940	3,818	3,739	3,850	4,100	38%	22%
" "	116	1,687	3,123	3,540	3,529	2,596	2,710	2,880	71%	-8%
" "	114	2,964	6,512	2,660	5,549	5,412	4,200	6,100	106%	-6%
" "	112	5,236	7,441	7,134	7,794	7,996	8,000	7,150	37%	-4%
Tennga-Gregory Road	178	886	781	640	632	1,391	1,350	1,490	68%	91%
GA 2 (between GA 225 & US 411)	172	1,402	996	900	884	979	1,040	810	-42%	-19%
Old CCC Camp Road	161	5,938	5,174	4,248	4,300	4,712	5,080	5,170	-13%	0%
" "	163	1,194	965	1,060	1,263	1,471	1,490	1,150	-4%	19%
" "	167	463	281	440	371	337	390	330	-29%	17%
Alt. GA 52	129	10,894	9,661	10,586	10,564	9,296	9,500	9,680	-11%	0%
" "	132	5,420	7,479	7,727	8,138	6,205	6,470	6,710	24%	-10%
" "	134	5,320	6,419	6,614	6,779	6,469	6,880	6,800	28%	6%
Spring Place-Smyrna Road	227	6,013	4,723	3,540	4,982	3,445	3,210	3,400	-43%	-28%
Smyrna-Ramhurst Road	225	2,572	2,298	2,814	2,882	2,291	2,170	2,290	-11%	0%
Brown Bridge Road	125	2,601	3,125	3,571	3,700	4,659	4,590	3,590	38%	15%
Old Highway 411	194	4,045	4,515	4,643	4,768	4,214	4,550	4,630	14%	3%
" "	192	497	815	1,000	693	7,65	690	730	47%	-10%
GA 136	189	1,851	2,301	253	2,446	2,612	2,400	2,870	55%	25%
Maple Grove Church Road	101	936	1,388	1,357	1,469	1,085	1,010	920	-2%	-34%
Minor Collector										
Holly Creek-Cool Springs Rd.	187	1,978	2,027	2,440	2,232	820	60	n/a	n/a	n/a

Source: Georgia DOT, Annual Traffic Counts

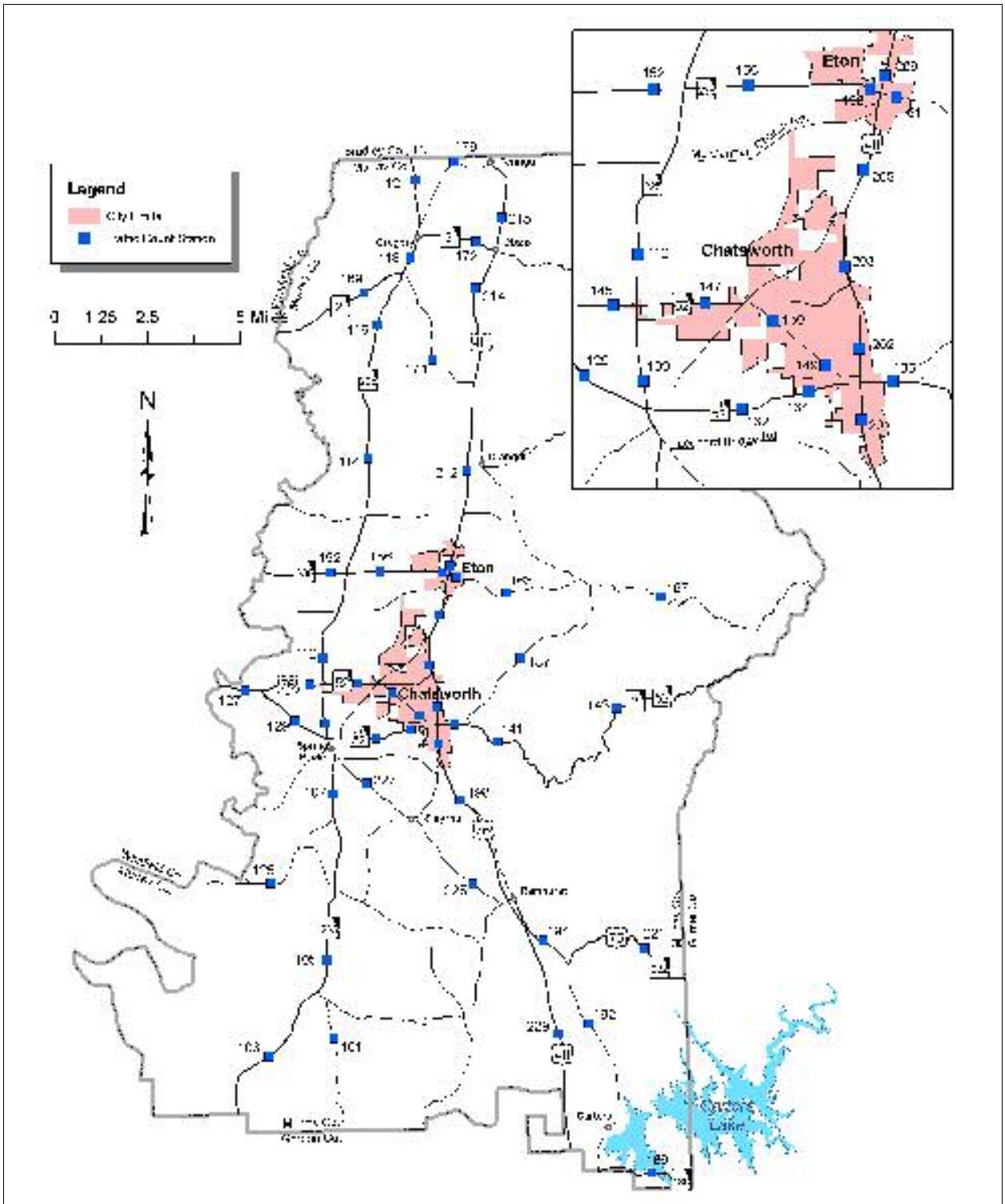


Figure 8-C.
Select Traffic Count Stations in Murray County

Roadway Conditions

According to the Georgia DOT, in 2003, 86% of the public lane miles in Murray County were paved, compared to the statewide figure of 74%. Table 8-F provides data on the type of surface found on the public roads in Murray County.

Table 8-F. Mileage of Public Roads by Surface Type

Type of Street (Public Streets Only)	Total Mileage	Mileage by Surface Type				% of Miles Paved	
		Unpaved (Stone & Gravel)	Low Type Bituminous	High Type Bituminous	Concrete	Murray	Georgia
State Routes	101.45	0.00	0.00	101.45	0.00	100%	100%
County Roads	427.00	48.56	160.37	218.03	0.04	89%	65%
City Streets	32.91	0.00	5.10	27.81	0.00	100%	96%
Other Public Roads	36.47	36.43	0.04	0.00	0.00	<1%	37%
Total Miles	**597.83**	**84.99**	**165.51**	**347.29**	**0.04**	**86%**	**74%**

Source: GDOT Office of Information Services, 400 Series Reports, 1DPP441-PDS

* The total miles in Table 8-F does not equal the "total miles" in Table 8-A because Table 8-F includes the category "other public roads," most of which are unpaved

Heavily loaded truck traffic is a major cause of road deterioration. Road surface conditions can change very quickly if truck traffic increases on a particular road segment. For this reason, GDOT does not program resurfacing projects beyond one or two years.

Murray County's Road Department maintains a schedule of roads which need to be paved or resurfaced. County roads which are scheduled for resurfacing in the near future include the following:

- Acron Drive (0.33 mi.)
- Catalina Drive (0.40 mi.)
- Center Hill Church Road (1.45 mi.)
- Connally Road (1.46 mi.)
- Grand Prix Blvd. (0.37 mi.)
- Hardwork Raod (0.50 mi.)
- Huffman Road (0.14 mi.)
- Old Federal Road (2.64 mi.)
- Pate Road (0.54 mi.)
- Prince Bean Road (1.62 mi.)

Chatsworth and Eton use Local Road Assistance Program (LARP) funds from the Georgia DOT to resurface roads. Both cities have completed their annual resurfacing projects and will not make a new list of projects until next year.

Incident Data

The Georgia Department of Motor Vehicle Safety (DMVS) maintains records on traffic incidents. As shown in Table 8-G, Murray County had fewer crashes per licensed driver in 2002 than all neighboring counties except Gilmer County. Table 8-H compares the number of crash-related injuries or fatalities which occurred in Murray and neighboring counties over a five year period. Figure 8-D on the following page shows the locations of the traffic incidents which occurred between 2000 and 2002.

Table 8-G. 2002 Traffic Incident Data for Murray and Nearby Counties

County	Total Number of Crashes*	Annual Vehicle Miles Traveled (100 million miles)	Crashes per 100 Million Vehicle Miles Traveled	Number of Licensed Drivers	Crashes per 100 Licensed Drivers
Murray	**601**	**429**	**140**	**27,723**	**2**
Catoosa	2,061	751	274	42,829	5
Fannin	599	266	225	18,790	3
Gilmer	436	373	117	20,659	2
Gordon	1,679	839	200	37,262	5
Pickens	588	331	178	22,988	3
Whitfield	3,829	1,418	270	68,405	6
Georgia	**327,774**	**106,785**	**307**	**6,574,423**	**5**

Source: Georgia Department of Motor Vehicle Safety

*Includes crashes with and without injuries or fatalities

Table 8-H Number of Injuries and Deaths Resulting from Highway Crashes

County	Injuries					Fatalities				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Murray	**435**	**422**	**528**	**420**	**432**	**6**	**9**	**8**	**12**	**8**
Catoosa	850	599	893	947	1,051	6	10	6	6	13
Fannin	284	244	339	316	342	10	6	3	7	7
Gilmer	238	171	260	279	248	11	6	7	10	2
Gordon	953	751	843	804	880	11	14	17	18	7
Pickens	313	167	357	354	310	4	4	11	13	8
Whitfield	1,510	1,386	1,474	1,580	1,497	12	18	17	13	16
Georgia	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Source: Georgia Department of Motor Vehicle Safety

Table 8-I provides data regarding crashes by age in Murray County and compares these statistics with statewide crash rates. Licensed drivers in Murray County between the age of 16 and 20 have a significantly higher rate of crashes than do older licensed drivers. For example, drivers between the age of 16 and 17 averaged 11 crashes per 100 licensed drivers in 2002, while drivers over the age of 24 averaged 3 crashes per 100 licensed drivers. Crash rates by age in Murray County were lower than statewide rates.

Table 8-I. Crashes by Age and Rate per 100 Licensed Drivers in 2002

Age	Murray County			Georgia		
	# of Licensed Drivers	# of Licensed Drivers In Crashes	Crashes per 100 Licensed Drivers	# of Licensed Drivers	# of Licensed Drivers In Crashes	Crashes per 100 Licensed Drivers
16-17	827	88	11	165,980	29,144	18
18-20	1,443	112	8	318,717	56,172	18
21-24	2,268	120	5	497,949	67,440	14
Over 24	22,917	745	3	5,536,891	433,556	8
Total	**27,455**	**1,065**	**4**	**6,519,537**	**586,312**	**9**

Source: Georgia Department of Motor Vehicle Safety

*Note that the total number of licensed drivers in Table 8-G and 8-I are not equal. Both sets of data are from the Georgia Department of Motor Vehicle Safety. It is not know why the totals are different.

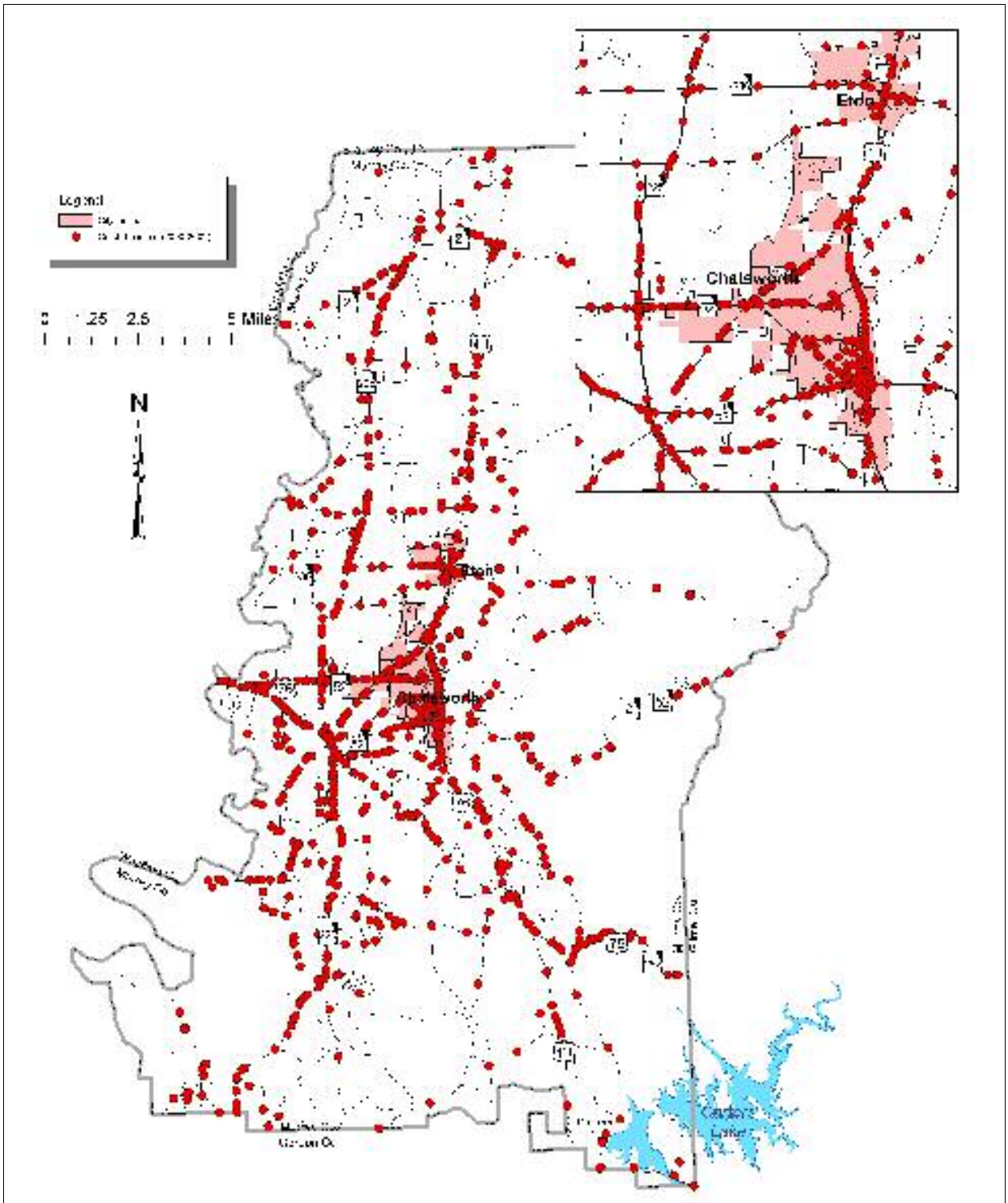


Figure 8-D.
Location of Traffic Incidents in Murray County (2000-2002)

8.1.2. Bridges

All bridges in Murray County which have a span of 20 feet or more are inspected every two years by GDOT's Bridge Inspection Division and copy of the inspection report is provided to Murray County. There are more than 40 bridges in Murray County which span over 20 feet and these are listed in Table 8-J. According to the most recent inspection report, all bridges on state routes are structurally sufficient.

Table 8-J. Locally Owned Federal Aid Route Inspected Bridges in Murray county

Location	ID	Type	Condition
CR 97, Airport Road over Conasauga River	213-0038-0	bridge	good
CR 299, CCC Camp Road over Mill Creek	213-0039-0	bridge culvert	good
CR 299, CCC Camp Road over Mill Creek Tributary	213-0040-0	bridge culvert	good
CR 299, CCC Camp Road over Muskrat Creek	213-0041-0	bridge culvert	good
CR 299, CCC Camp Road over Emery Creek	213-0048-0	bridge	fair (posted)
CR 302, Tennga Road over Perry Creek	213-0042-0	bridge culvert	good
CR 309, Old US 411 over Coosawattee River	213-0043-0	all concrete bridge	satisfactory
CR 309, Old US 411 over Willbanks Branch	213-0044-0	bridge	fair (posted)
CR 48, Ramhurst Road over Holly Creek	213-0004-0	bridge	fair (posted)
CR 3, Hemphill Road over Sugar Creek Tributary	213-5002-0	bridge culvert	satisfactory
CR 4, Dennis Mill Road over Sugar Creek	213-5003-0	bridge culvert	good
CR 9, Wilbanks Road over CSX Railroad	213-5005-0	bridge	good
CR 17, Tom Terry Road over Holly Creek	213-5006-0	bridge	good
CR 20, Old Federal Road over Mill Creek	213-5007-0	bridge	fair (posted)
CR 23, Red Cut Road over Pinhook Creek	213-5008-0	bridge culvert	good
CR 23, Loughridge Road under CSX Railroad	213-5033-0	non-roadway structure	low clearance
CR 23, Loughridge Road over Mill Creek	213-5009-0	bridge	poor (posted)
CR 27, Crandall Ellijay road over Mill Creek	213-5010-0	bridge culvert	good
CR 69, Carters Road over Willbanks Branch	213-5011-0	bridge culvert	good
CR 69, Carters Road over CSX Railroad	213-5012-0	bridge	good
CR 73, Ball Ground Road over Rock Creek	213-5016-0	bridge	good
CR 75, Berry Bennet Road over Holly Creek	213-5018-0	bridge	good (posted)
CR 20-, Tibbs Bridge Road over Conasauga River	213-5020-0	bridge	good
CR 109, Brown Bridge Road over Bullpen Branch	213-5021-0	metal pipe culvert	poor
CR 113, Greeson Road over Tower Branch	213-5035-0	bridge culvert	good
CR 132, Mitchell Bridge Road over Pinhook Creek	213-5022-0	bridge culvert	good
CR 175, Charton Petty Road over Conasauga River	213-5034-0	bridge	good
CR 180, Shields Road over Perry Creek	213-5026-0	bridge culvert	good
CR 216, Hawkins Road over Sumac Creek Tributary	213-5037-0	metal pipe culvert	good
CR 256, Hasslers Mill Road over Mill Creek	213-5027-0	bridge	satisfactory
CR 297, Fox Bridge Road over Holly Creek	213-0037-0	bridge	good
CR 301, Cool Springs Road over CSX Railroad	213-5028-0	bridge	good/satisfactory
CR 301, Cool Springs Road over Chicken Creek	213-5029-0	bridge culvert	satisfactory
CR 301, Cool Springs Road over Rock Creek	213-5030-0	bridge culvert	good
CR 301, Cool Springs Road over Mill Creek	213-5031-0	bridge culvert	good
CR 301, Holly Creek-Cool Spring Road over Holly Creek	213-5032-0	bridge	good (posted)
CR 310, Old Highway 411 over Chicken Creek	213-0045-0	bridge	fair
CR 339, Coniston Road over Sugar Creek	213-5015-0	bridge	fair (posted)
CR 352, Peeples Spur over Rock Creek	213-5036-0	bridge	fair (posted)
CR 364, Sugar Creek Road over Oak Grove Branch	213-5025-0	bridge culvert	good
CR 392, Old SR 2 over Conasauga River Tributary	213-5039-0	bridge	satisfactory
CR 505, McNeely road over Conasauga River Tributary	213-5041-0	bridge	satisfactory
CR 1, over Carters Lake Overflow	213-5001-0	owned and maintained by Corp of Engineers	not inspected
CR 392, Old SR 2 over Conasauga River	213-5040-0	owned and maintained by US Forest Service	fair

Source: Georgia Department of Motor Vehicle Safety. "Posted" means the structure has been posted with weight limitations.

In terms of evacuation, closing any bridge leading over the Conasauga River into Whitfield County or over the Coosawattee River into Gordon County could affect evacuation out of the Murray County.

8.1.3. Signalization and Signage

There are 11 signalized intersections in Murray County. The locations are shown in Figure 8-E on the following page. A signal is planned for the intersection of GA 286 and GA 225. The Spring Place Bypass will also require signals. As traffic volumes increase, more signals may be warranted to improve safety at intersections.

8.1.4. Parking Facilities

On street parking is available in downtown Chatsworth and Eton. Currently, both cities have adequate parking availability. There is one park and ride lot located behind the County Courthouse Annex in Chatsworth. At present, no additional parking facilities are planned.

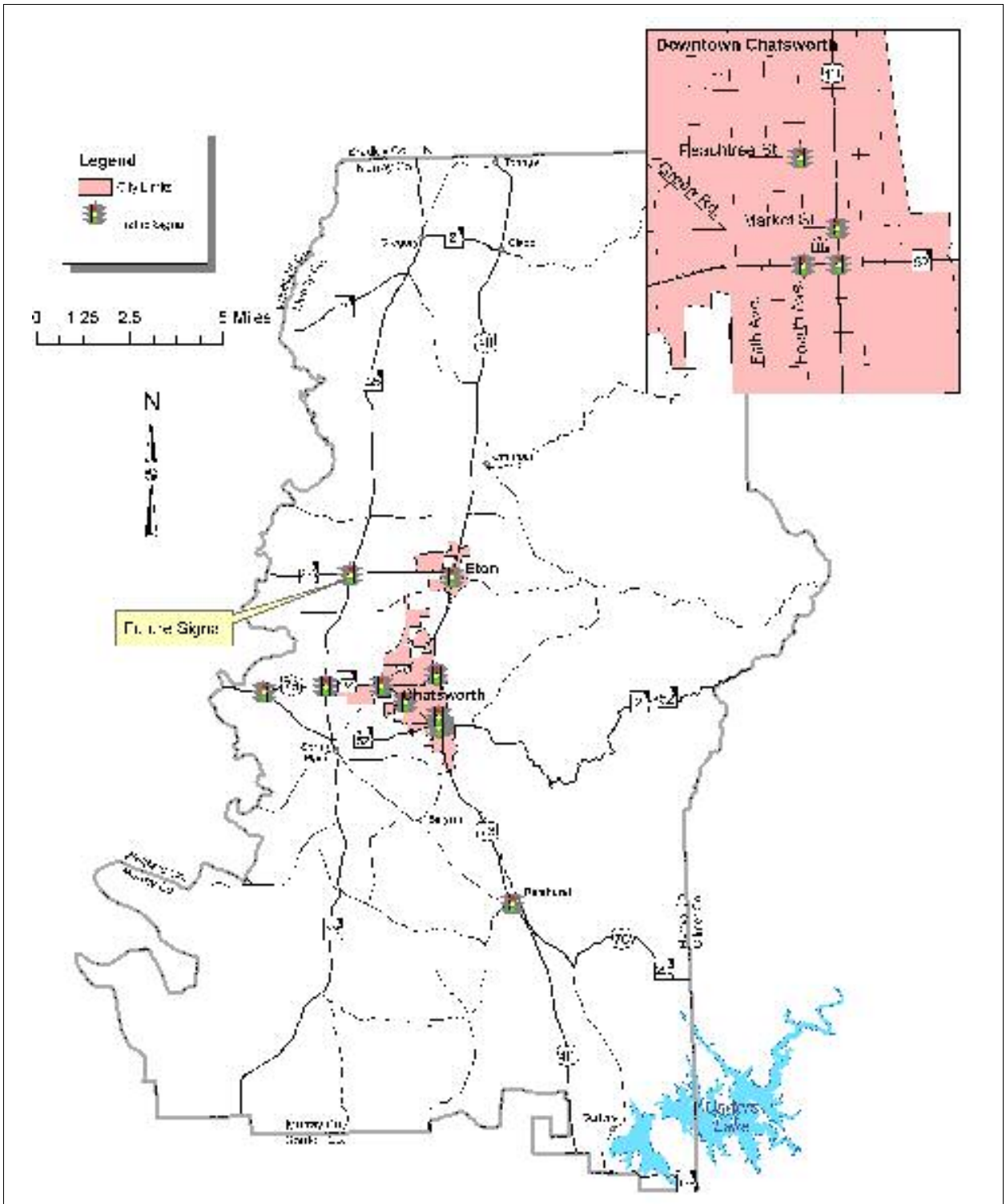


Figure 8-E.
Signalized Intersections
in Murray County

8.1.5. Bicycle and Pedestrian Facilities

Bike Routes. The Georgia Bicycle Master Plan, developed by GDOT, includes 14 bicycle routes. The "Mountain Crossing" bike route, which is included in the plan, traverses Murray County along Tibbs Bridge Road, Alternate GA 52, and GA 2/GA 52.

The North Georgia and Coosa Valley RDCs completed a regional bicycle and pedestrian plan for the Georgia DOT in the summer of 2005. The purpose of the plan is to enhance and promote bicycle and pedestrian transportation throughout the region. The plan is funded by GDOT and is expected to influence GDOT's long range work program elements for bicycle and pedestrian improvements in the region. The proposed bike routes shown in Figure 8-F were potential routes identified in the regional plan.

Sidewalks. Murray County contains almost 18 miles of sidewalks, the majority of which are located in the City of Chatsworth. (See Figure 8-G.) Eton contains a limited number of sidewalks also shown in Figure 8-G. There are no sidewalks in the unincorporated areas of the county.

Trails. Murray County contains numerous miles of recreational trails, most of which are located in the Chattahoochee National Forest. More information on trails in Murray County can be found at http://georgiatrails.com.

8.1.6. Public Transportation

The Murray Transit System (MTS) provides transportation to (1) senior citizens, (2) residents working through the Development Center and Department of Human Resources, and (3) the general public. Its offices are located in the Murray County Senior Center. The Transit System employs a director, three full-time drivers, and four part-time drivers.

Six buses, five of which have wheelchair lifts, operate on a flexible, fixed route schedule, Monday through Friday, from 8:00 a.m. to 5:00 p.m. Each vehicle averages around 100 miles per day and the fleet makes approximately 3,500 one way trips per month. In 2006, MTS will be receiving three new buses from the Georgia DOT. Two will replace existing vehicles and the third will serve as the seventh vehicle in the fleet. All buses will have wheelchair lifts.

The most common destinations are the Senior Center, the Murray County Developmental Center on Chestnut Street in Chatsworth, the dialysis clinic near the hospital, and various medical offices. MTS has a contract with the Department of Family and Children Services to provide transportation to its clients. MTS has recently been awarded a contract with the Department of Labor to transport individuals enrolled in vocational rehabilitation to Dalton State College.

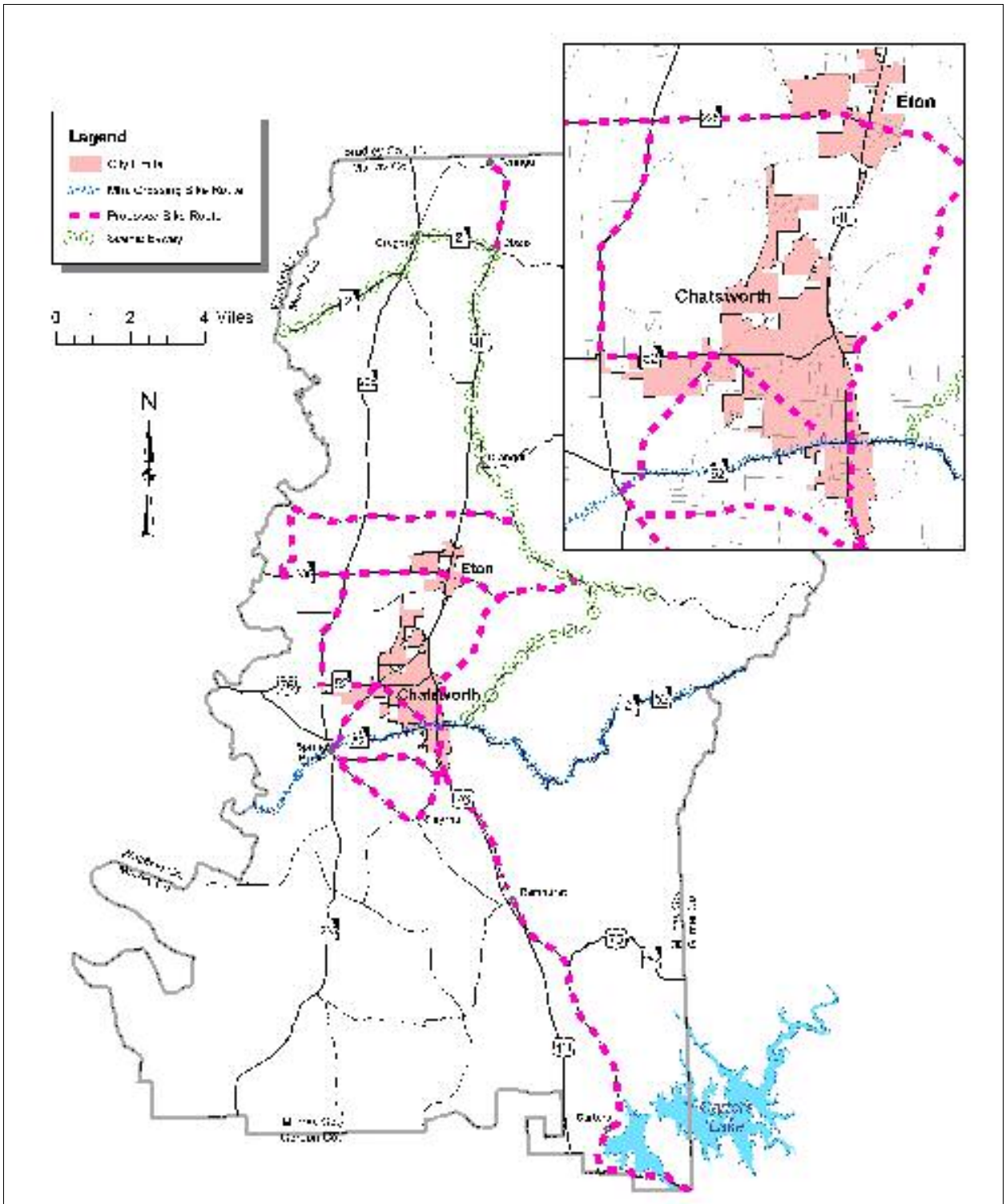


Figure 8-F.
Existing and Proposed Bike Routes in Murray County

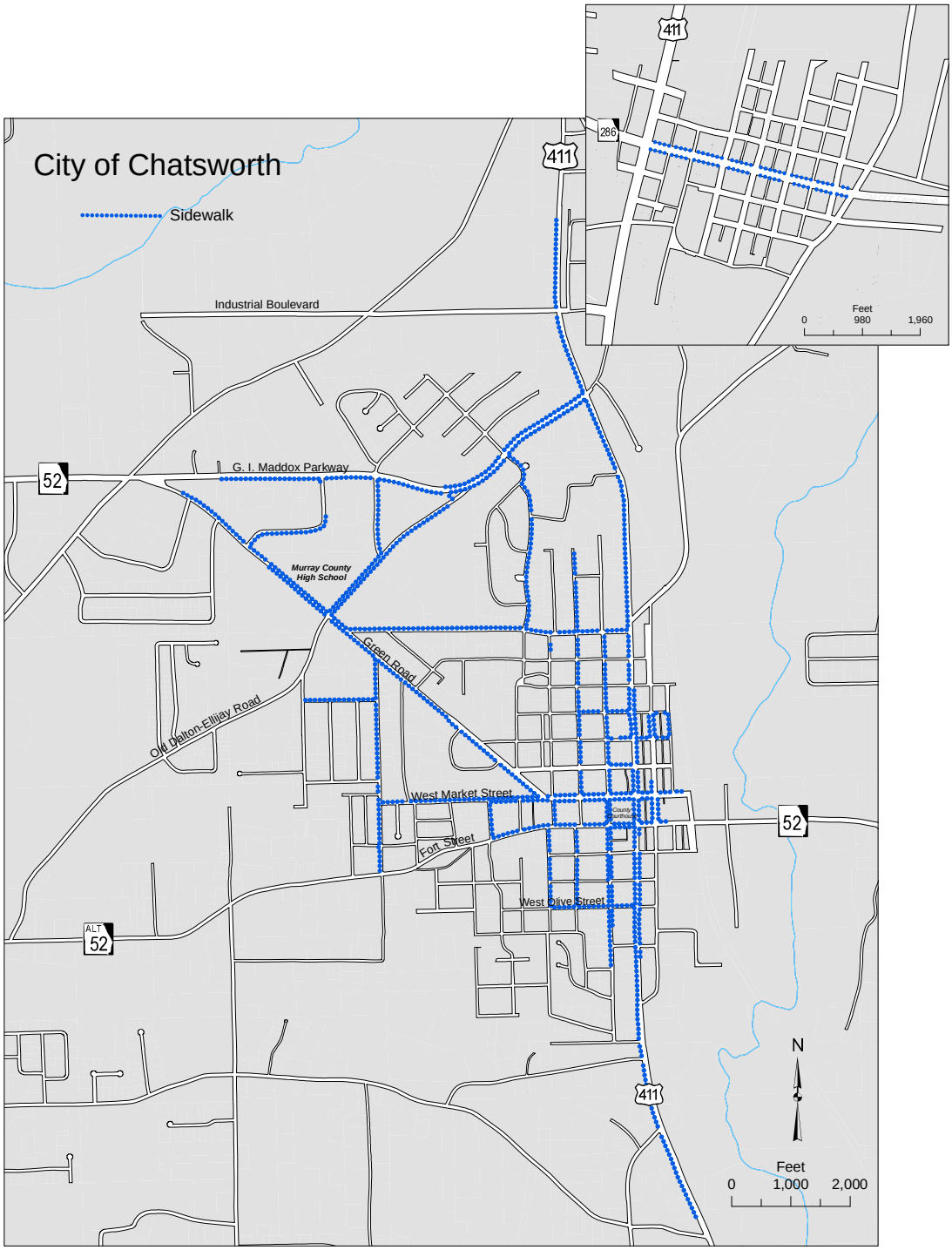


Figure 8-G.
Sidewalks in Chatsworth and Eton

8.1.7. Railroad

CSX Corporation provides rail freight service in Murray County. The location of CSX's rail line in Murray County is shown in Figure 8-H.

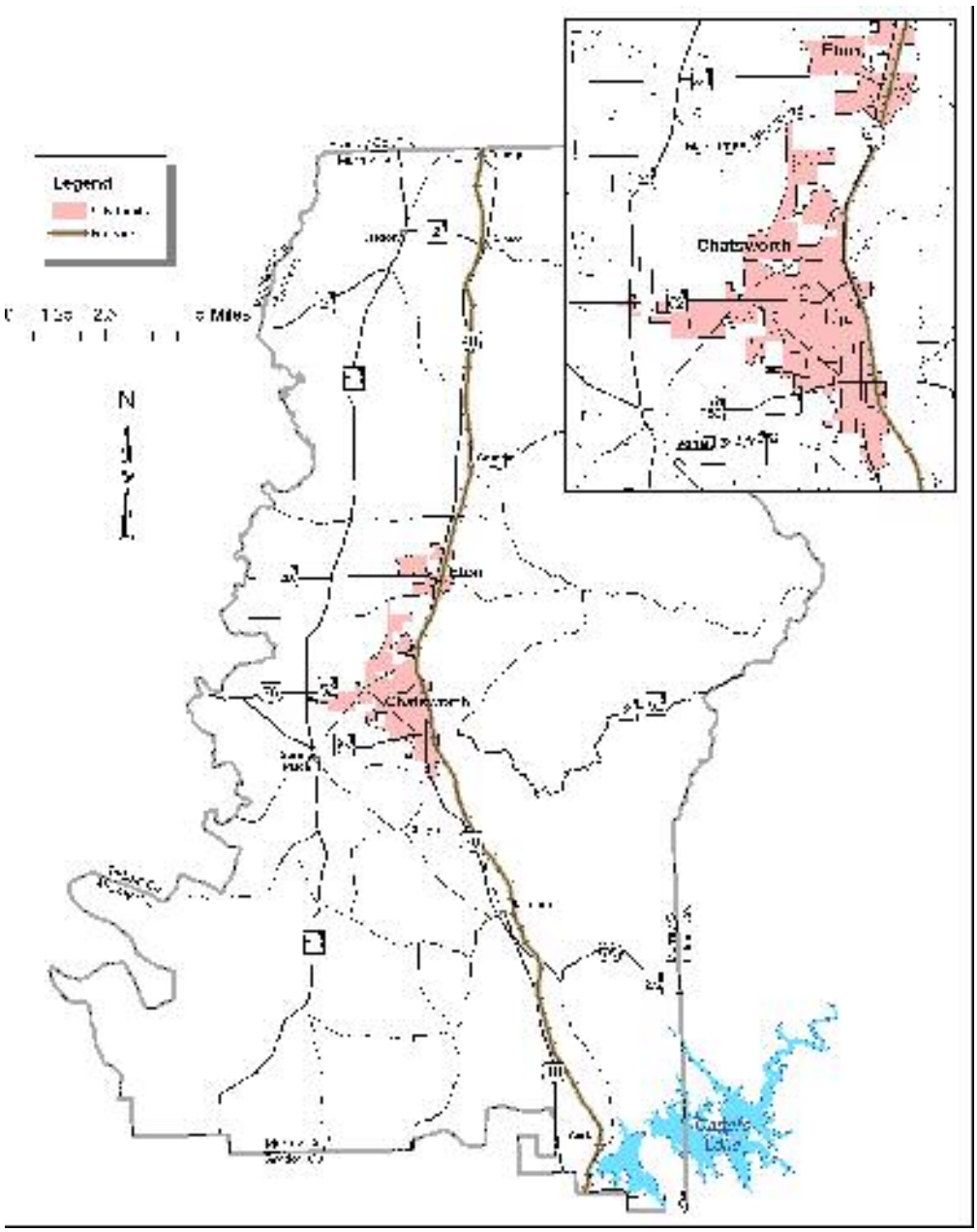
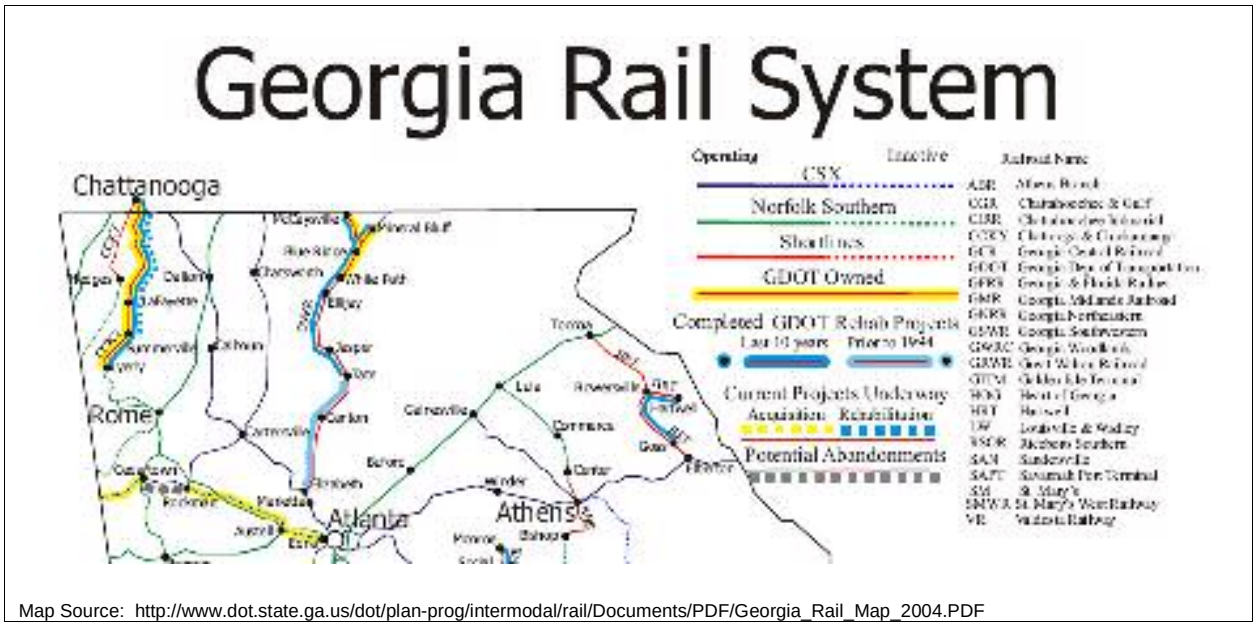


Figure 8-H.
Rail Lines in Murray County

The overall rail system for the northern half of Georgia is shown in Figure 8-I below. No passenger rail service is available in Murray or adjacent counties.



Map Source: http://www.dot.state.ga.us/dot/plan-prog/intermodal/rail/Documents/PDF/Georgia_Rail_Map_2004.PDF

Figure 8-I. Georgia Rail System, January 2005.

8.1.8. Airports

There are no public airports in Murray County. Dalton Municipal Airport, located in Whitfield County, is the closest public airport. The runway is paved and 5,000 feet in length. The following operational statistics were obtained at the AirNav website (http://www.airnav.com/airport/KDNN):

Aircraft based on the field:	63
Single engine airplanes:	47
Multi engine airplanes:	13
Jet airplanes:	2
Helicopters:	1
Aircraft Operations (avg.):	76/day (54% transient general aviation, 45% local general aviation, and 1% military)

The closest airports with commercial passenger flights are Hartsfield-Jackson Atlanta International Airport (96 miles from downtown Chatsworth) and Chattanooga Metropolitan Airport (42 miles from downtown Chatsworth).

8.2. Assessment of Current and Future Needs

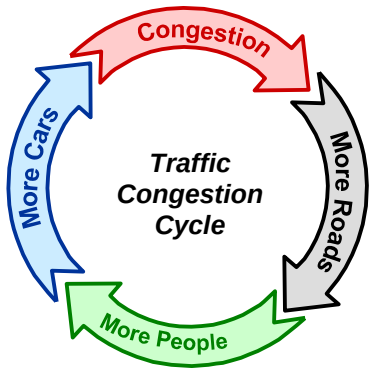
Section 8.1 provided an inventory of the components of Murray County's transportation network. The assessment in this section answers the following question which was derived from the requirements in Section 110-12-1-.04(12)(h)ii of the Minimum Standards and Procedures for Local Comprehensive Planning:

> ***Can the future needs of the community can be met with existing transportation facilities and services? If not, what improvements will be needed to (1) accommodate anticipated population and economic growth and (2) provide a safe and efficient transportation network?***

Based on population and employment projections, the future transportation needs of Murray County cannot be met by the existing transportation facilities and services. The following facilities and services are analyzed in this section: streets, roads, and highways; parking facilities; bicycle and pedestrian facilities; and public transit.

8.2.1. Streets, Roads, and Highways

In most parts of the country, a "traffic congestion cycle" exists whereby a road is built or widened which adds capacity. Development then occurs along the road which attracts people who drive vehicles, which adds to congestion. New roads are built to add capacity, which attracts people, adding to congestion, and so on and so on. This cycle is illustrated to the right.



"Level of Service" (LOS) is a measure of traffic congestion along a segment of roadway and is expressed as letters "A" through "F" with "A" being the best travel condition and "F" being the worst. LOS can be further defined as follows:

LOS A – Free flow or unrestricted traffic movement
LOS B – Stable flow, noticeable traffic
LOS C – Stable flow with more traffic interactions
LOS D – High density traffic with restricted speed and freedom to maneuver
LOS E – Road is operating at or near capacity, speed is low, convenience is poor
LOS F – Unstable flow, severe congestion

GDOT's MultiModal Transportation Planning Tool (MTPT) was used to perform a basic highway analysis for Murray County. The MTPT estimates the level of service for various road segments.

It should be noted that the MTPT provides a simplified analysis of current and future traffic conditions in Murray County. A more accurate analysis would require the development of a model which is specifically tailored to Murray County's land use, population, traffic, and transportation network. In addition, the traffic network in the MTPT uses roads which were in existence in 2004. Road improvements may have been made since that time which would influence the output of the model.

While the MTPT does have its limitations, it is a valuable tool for providing a general picture of traffic conditions which are likely in Murray County in the future. The following sections summarize the results from the MTPT analysis in terms of predicted levels of services for the current year, 2014, and 2024. The results are described in general terms first, and then more specifically by jurisdiction.

Current Year LOS

Overview. Figure 8-J on the following page illustrates current (year 2004) traffic levels of service for various road segments in Murray County. The levels of service which are illustrated are for some time period during the day, most likely during the AM and PM peak hours, and not necessarily during the entire day.

Chatsworth. US 411 and GA 52 and Alternate GA 52 are the only roads in the City of Chatsworth which were evaluated by the MTPT. According to the analysis, these roads are currently operating at level of service B, C, or D.

Eton. In Eton, US 411 and GA 286 were evaluated by the MTPT. US 411 functions generally at LOS B while GA 286 (within the City limits) functions at LOS C.

Unincorporated Areas. According to the MTPT analysis, the segments of road with the worst levels of service are GA 225 between GA 286 and Berry Bennett Road and Alternate 52 between GA 52 and Spring Place.

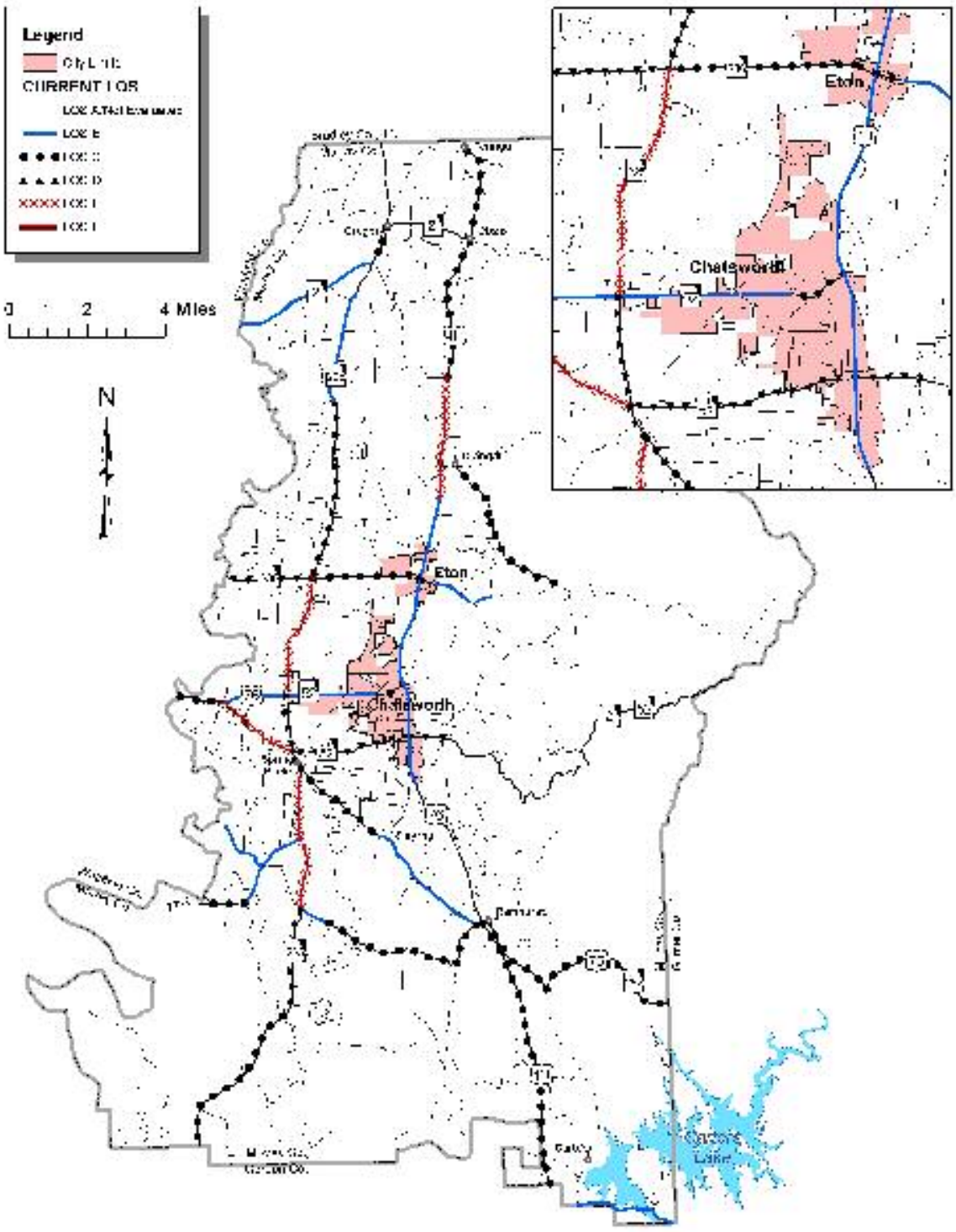
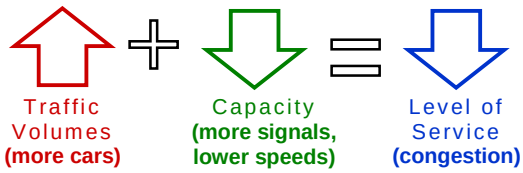


Figure 8-J.
Current Year (2004)
Level of Service

Ten Year LOS

Overview. Figure 8-K on the following page illustrates likely traffic conditions in 2014. Traffic along major corridors is becoming more congested. Given the proliferation of new development in certain portions of the county, particularly around Eton and at the intersection of GA 286 and GA 225, the levels of service will likely be worse than shown.

By 2014, not only will overall traffic volumes in the community be greater, but associated turning movements (right and left turns onto and off of a highway) will be greater as well. More traffic signals will be required and reduced speed limits will be requested in an attempt to improve safety. All of these factors will contribute to a reduction in the overall capacity of the road network. Increased traffic volumes combined with decreased capacity will lead to lower levels of service.



Chatsworth. Alternate GA 52 and GA 52 east of US 411 are the two roads which are projected to function at LOS F. Although most of the other streets in the City limits were not analyzed by the MTPT, the City benefits greatly from a grid street network which provides motorists with multiple routes of travel during periods of peak congestion.

Eton. GA 286 west of US 411 is projected to function at LOS F within the next ten years. US 411 will function at LOS C or D. As stated previously, the MTPT uses past growth rates to predict future growth trends. The City of Eton has experienced unusual industrial and commercial growth in the past year and that growth is not reflected in the MTPT model. For this reason, levels of service in ten years are likely to be worse than predicted by the MTPT.

Unincorporated Areas. Several road segments in the unincorporated areas will function at LOS F within the next ten years if no road improvements are made. It is likely that traffic conditions in some parts of the county will reach LOS F very quickly, particularly in areas experiencing heavy development such as the area around the intersection of GA 286 and GA 225.

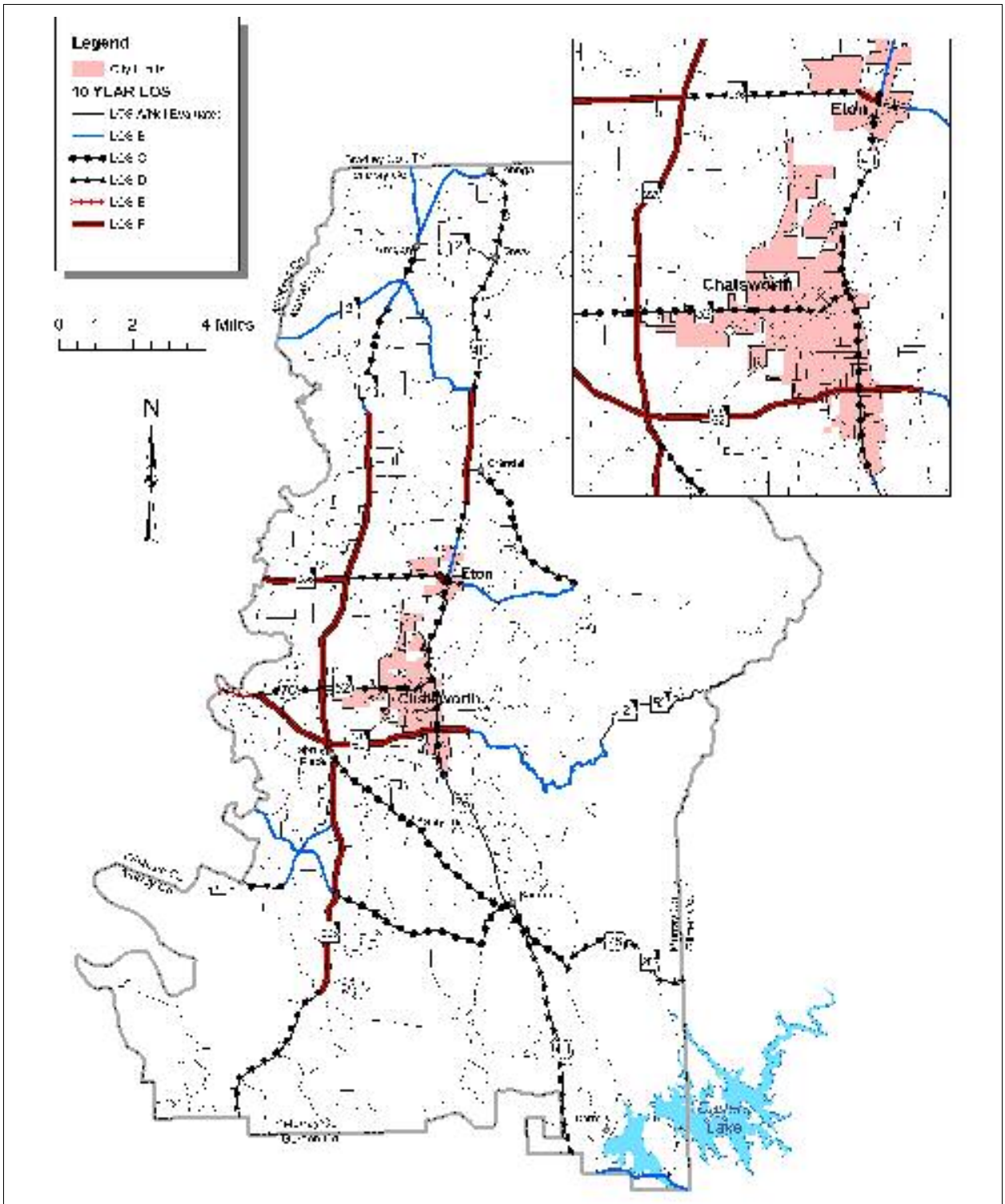


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Figure 8-K.
Ten Year (2014) Level of Service

Twenty Year LOS

Overview. Figure 8-L on the following page illustrates likely traffic conditions in 2024. Note that most major road corridors will be functioning at LOS F for some portion of the day. Improving connectivity throughout the county will be an important way of achieving relief from traffic congestion.

Chatsworth. All major roads will be functioning at LOS E or F if no improvements are made to increase the capacity of the road network.

Eton. All major roads will be functioning at LOS E or F if no improvements are made to increase the capacity of the road network.

Unincorporated Areas. With a few exceptions, the major roads in the unincorporated areas will be functioning at LOS C or worse, with many of the roads functioning at LOS F.

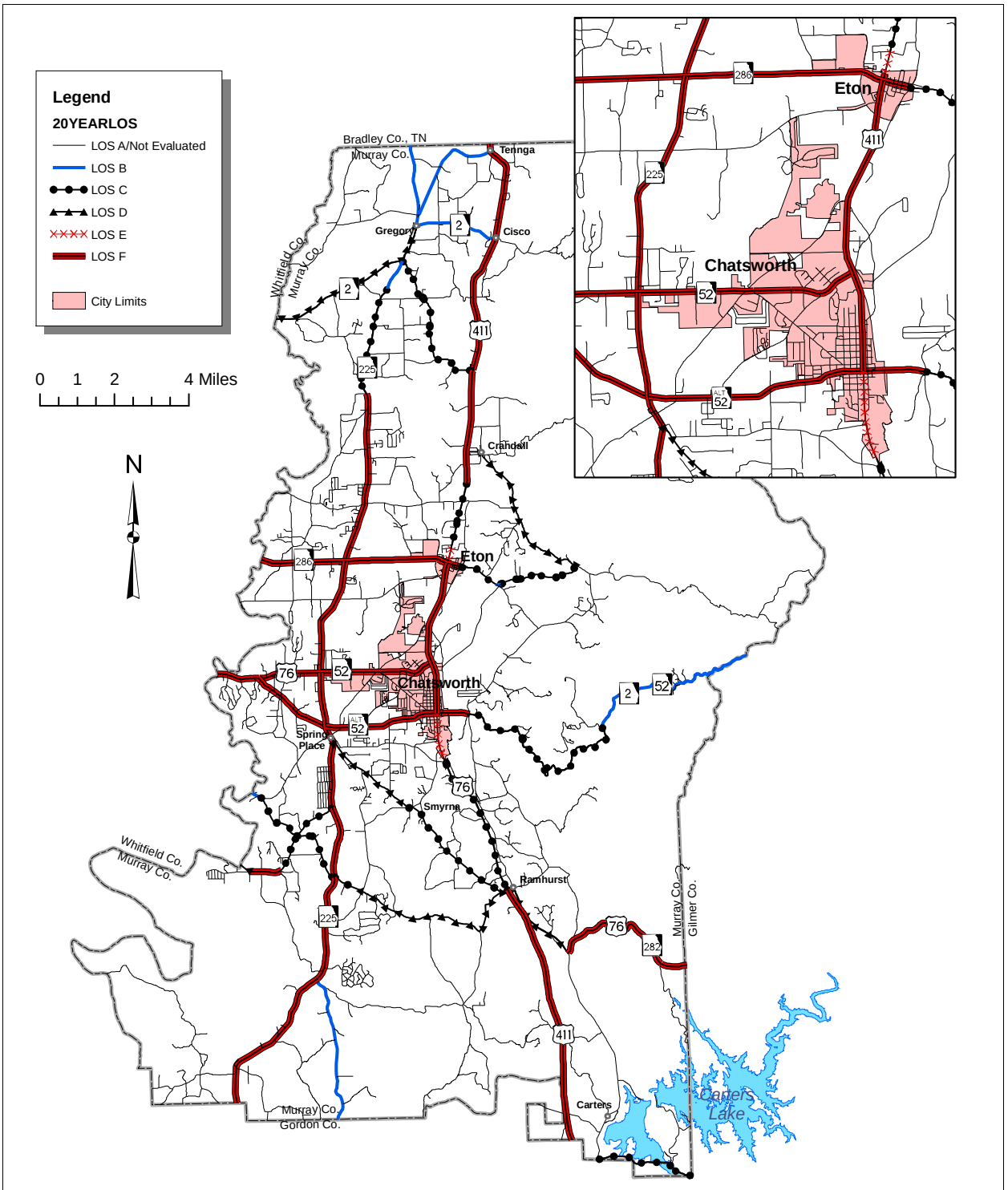

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Figure 8-L.
Twenty Year (2024) Level of Service

Roadway Improvements

As is the case with most counties in the North Georgia region, Murray County is growing rapidly and the strain on the existing transportation network is reflecting this growth. It is not surprising that numerous improvements to county and state roads will be needed to enhance the capacity of the road network.

Planned roadway improvements included in the State Transportation Improvement Program are listed in Table 8-J. These are the GDOT's committed road projects for the next three years.

Table 8-K. State Transportation Improvement Program (6/21/2005)

Location	Phase	Year	Federal Funding	State Funding	Other Funding	Total
Vann House Land Acquisition for Historic Federal Road and Trail	ROW	--	$600,000	$0	$150,000	$750,000
SR 282 Relocation from SR61/US 411 to CR 309 (length 1.2 miles)	PE ROW CST	1992 2006 after 2006	$153,600 $472,800	$38,400 $118,200	$0 $0	$192,000 $591,000
SR 225 Spring Place Bypass from New Hope Road to SR 52/US 76 Phase 1 (length 3.72 miles) See Figure 8-M.	PE ROW CST	1996 after 2006 after 2006	$16,000	$4,000	$0	$20,000
Bridge improvements – SR 282 at Rock Creek	PE ROW CST	underway 2005 after 2006	$11,200	$2,800	$0	$14,000
Relocate CR 23 and construct a canoe/kayak ramp and parking area	PE ROW CST	underway underway --	$172,000	$0	$43,000	$215,000

Source: Georgia DOT PE: Plans and Engineering ROW: Right-of-Way CST: Construction

Following is a list of additional projects for Murray County which are part of GDOT's construction work program.

- ③ Bridge replacement at GA 52 and CSX railroad in Chatsworth.
- ③ CR 19/Old Federal Road grade separation at CSX Railroad
- ③ Bridge work at CR 23/Loughridge Road at Mill Creek

The MTPT analysis proposes a number of projects to enhance traffic capacity. Most of these projects are listed on the following page in Table 8-L. Estimated costs associated with the improvements are provided and are based upon an average statewide improvement cost. Actual costs could be significantly greater.

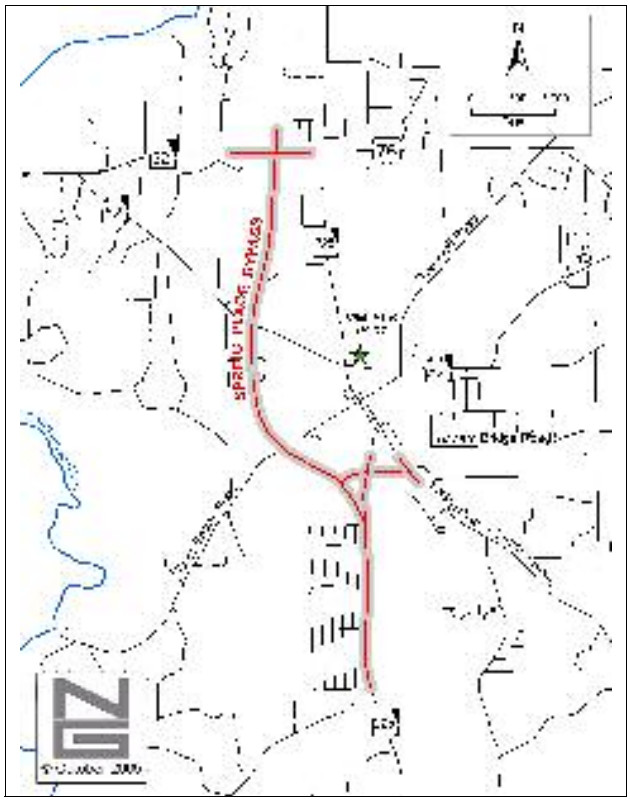

Figure 8-M. Spring Place Bypass.

The MTPT program is limited in the types of alternatives it proposes for road improvements. For example, for an existing two lane road, the MTPT will only propose the addition of one passing lane. In reality, some roads would be better served by the addition of one travel lane in each direction or travel lanes and a turning lane (an upgrade from 2 lanes to 5 lanes). For multi-lane roads (4 lanes or more), the MTPT will only analyze what occurs with the addition of one travel lane in each direction.

Table 8-L. Possible Future Roadway Improvements (Note: These projects are outputs of the MTPT computer analysis and are not necessarily projects which should or will occur in the future.)

Project Description	Length	Estimated Cost in 2010 $	LOS in 2024	
			no improvements	with improvements
GA 2, add one lane from Whitfield Co. to Gregory Mill Road	5.05 miles	$2,617,000	D	D
GA 2, add two lanes from Eton to Chatsworth	4.59 miles	$7,474,000	F	C, D, and E
GA 52/US 76, add two lanes from Whitfield County to US 411	5.95 miles	$9,688,000	F	E and F
GA ALT 52, entire length	5.35 miles	$2,770,000	F	F
GA 225, add one lane from Gordon County to Sumach Church Road	20.74 miles	$10,746,000	F	F
GA 282, add one lane from signal at Ramhurst to Gilmer County	6.89 miles	$3,569,000	D and F	D and F
GA 286, add one lane	5.09 miles	$2,638,000	F	F
US 411, add one lane from Gordon County to signal at Ramhurst	7.02 miles	$3,637,000	F	F
US 411, add one or two lanes from Leonard Bridge Road to Tennessee line	17.48 miles	$25,282,000	D and E	C and F

The information in Table 8-L is useful for getting an idea of the potential cost of needed road improvements. Even with the road improvements which are proposed, some road segments will still be at LOS F at some point during the day. For this and other reasons, it is important that the County and Cities continue to place a priority on developing a network of interconnected streets where such a network does not exist and enhancing networks that do exist.

Interconnected or gridded street networks have many advantages over cul de sacs. First, as shown in Figure 8-N, an interconnected grid or modified grid street system provides many routes from point A to point B, distributing traffic more evenly. Second, interconnected streets also decrease the distance traveled as a grid road network provides more direct routes than do cul-de-sac designs.

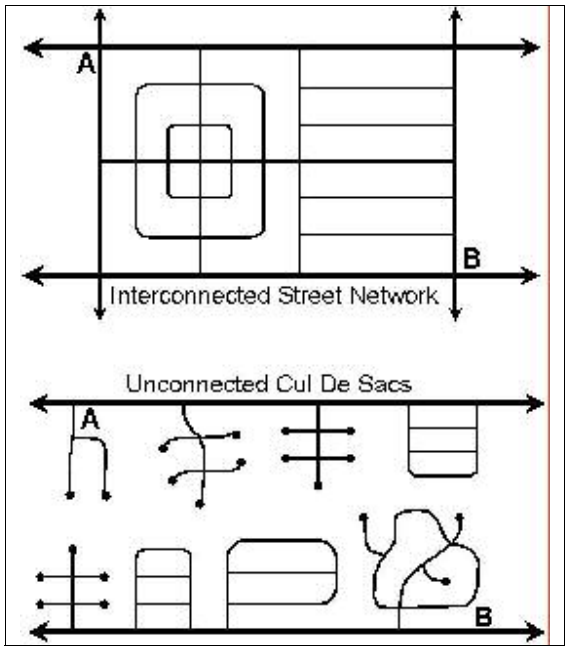

Figure 8-N. A comparison of interconnected streets and cul de sacs.

8.2.2. Parking Facilities

Large quantities of new municipal parking are not projected to be a significant need in Chatsworth or Eton during over the next several years; however, all future downtown improvement projects, including road improvements and streetscaping, should take into consideration any needs for parking.

8.2.3. Bicycle and Pedestrian Facilities

Making Murray County and its cities more bicycle friendly will enhance its attractiveness as a tourist destination and provide an alternative mode of transportation for those who either cannot afford a vehicle or prefer to use a bicycle. A number of bicycle facilities are proposed for Murray County in the Regional Bicycle and Pedestrian Plan. These were presented earlier in Figure 8-F. Conscious efforts must be made on the part of City and County governments to ensure that these plans are implemented.

Downtown Chatsworth currently has a good network of sidewalks. In some areas the sidewalks need to be improved to make them more user friendly and in some areas sidewalks do not exist. The Bicycle and Pedestrian Plan proposes an expansion of the sidewalk system to include the majority of the streets in the downtown area.

The City of Eton currently has limited sidewalks and the Bicycle and Pedestrian Plan proposes sidewalks that will complete a grid system in the areas of town east of US 411. Limited sidewalks are also proposed for Spring Place and a sidewalk connection between Chatsworth and Eton is recommended. All schools in the County and City should have sidewalks within at least a 1/4 mile radius. Proposed sidewalk locations are illustrated in Figures 8-O and 8-P.

8.2.4. Public Transportation

The need for public transportation service is expected to grow with the population. Expanding service should be investigated on an as-needed basis.

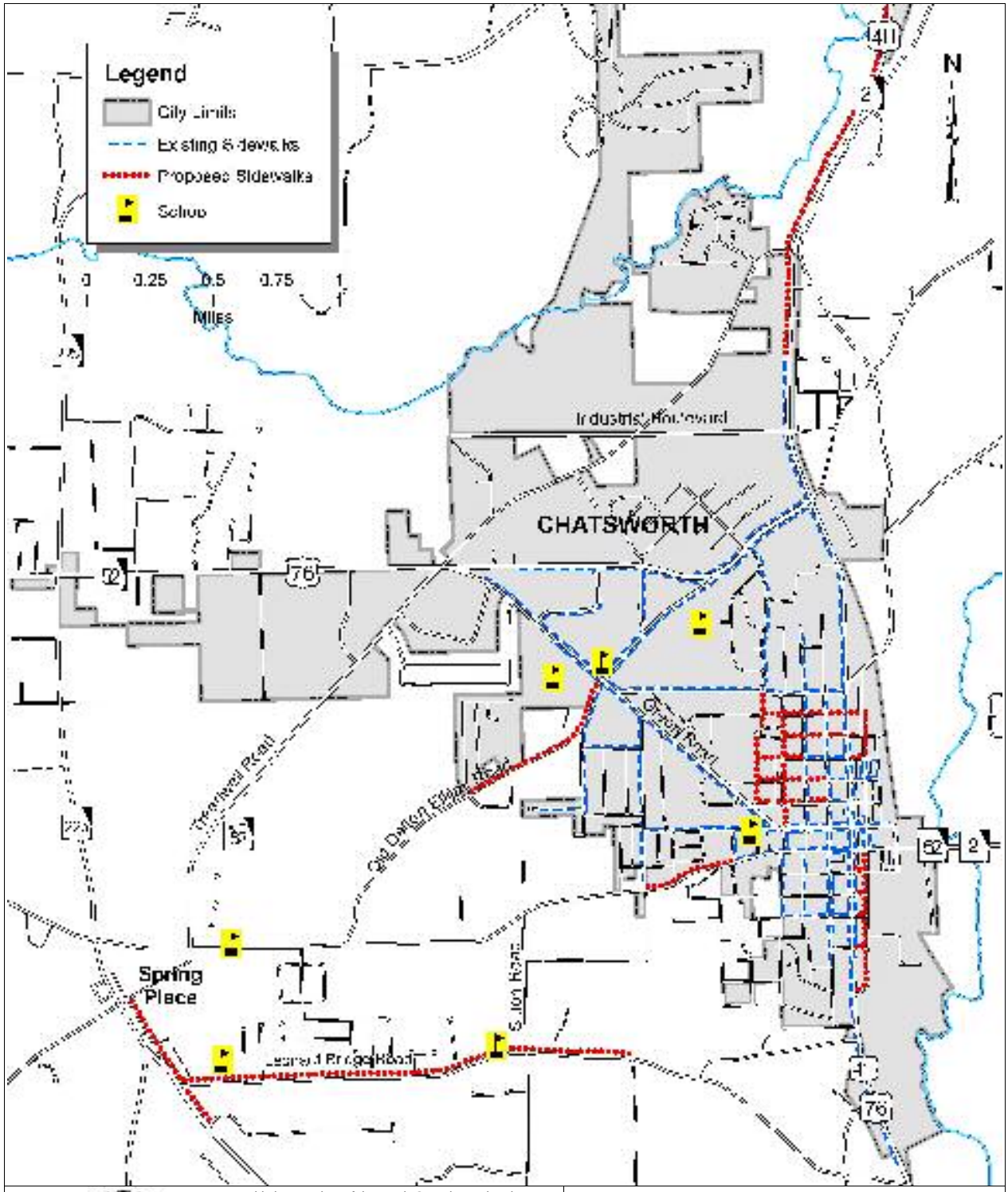

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Figure 8-O.
Existing and Proposed Sidewalks in Chatsworth and Surrounds

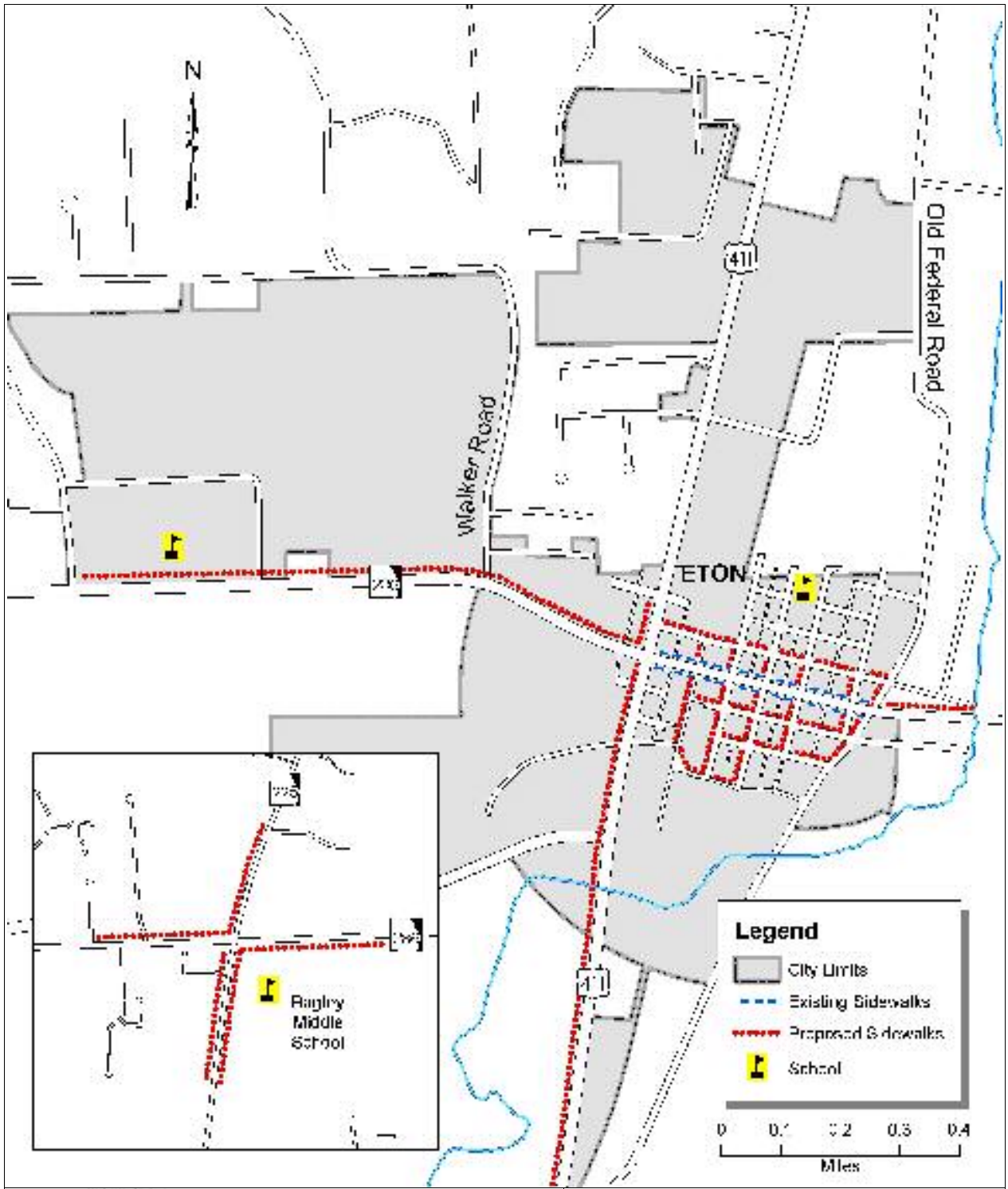

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Figure 8-P.
Existing and Proposed Sidewalks in Eton and Surrounds

8.3. Community Goal and Implementation Program

To support and achieve the community's joint vision statement, Murray County and the Cities of Chatsworth and Eton have developed the following transportation goal and associated policies and action items:

Goal: To achieve a modern, well-funded multi-modal transportation network that is efficient, safe, and protects the environment while enhancing the area's economic development.	
Policy 1: Quality Transportation System. A good transportation network is vital for the physical, social, and economic well-being of Murray County and the cities of Chatsworth and Eton; therefore transportation planning should be a priority for the community.	**Action Items:** a. Pursue system-wide improvements, including new connector roads and alternate routes, to improve the level of service on roads in the community. b. Maintain open communication with Georgia DOT. c. Continue to use the Local Assistance Road Program for resurfacing projects. d. Evaluate setback requirements, access, and zoning activities for properties on roads which will be widened in the future. e. Promote interconnections between developments as part of the plan review process. f. Develop a master plan for Spring Place prior to the completion of the Spring Place Bypass. g. Develop access management standards for the major road corridors to promote safe and efficient ingress and egress.
Policy 2: Transportation Alternatives.* Alternatives to transportation by automobile, including mass transit, bicycle routes, and pedestrian facilities, should be made available and greater use of alternative transportation should be encouraged.	**Action Items:** a. Support the implementation of the Regional Bicycle and Pedestrian Plan. b. Seek grant funding for bicycle and sidewalk projects. c. Seek additional funding for public transportation.
Policy 3: Regional Solutions. Regional solutions to needs shared by more than one local jurisdiction are preferable to separate local approaches, particularly where this will result in greater efficiency and less cost to the taxpayer.	**Action Items:** a. Coordinate east-west corridor improvements with Whitfield County. b. Support the implementation of the Regional Bicycle and Pedestrian Plan. c. Promote the Scenic Byway and Scenic Highway.

* A DCA "Quality Communities" Objective (required by the State Minimum Planning Standards)